

ABSTRACT OF THE DISCLOSURE

In a calibration apparatus and method for a resistance thermometer a reference thermometer is located in thermal contact with a gas composition to generate, during a calibration period, a first reference temperature value for the gas composition at a first temperature, and an acoustic meter is located in acoustic contact with the gas composition and, during the calibration period, makes an acoustic velocity-related measurement for use in generating a second reference temperature value for the gas composition at a second temperature. A calibration unit coordinates the first and second reference temperature values with first and second measurement temperature values provided by the resistance thermometer at the first and the second temperatures, respectively, and establishes a calibration relationship therefrom.

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